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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER PARKER ALTICE, JR.

Appeal 2009-009959
Application 10/751,440
Technology Center 2600

Before MAHSHID D. SAADAT, THOMAS S. HAHN, and
ELENI MANTIS MERCADER, *Administrative Patent Judges*.

MANTIS MERCADER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the final rejection of claims 1-45. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

INVENTION

Appellant's Figure 3 is depicted below:

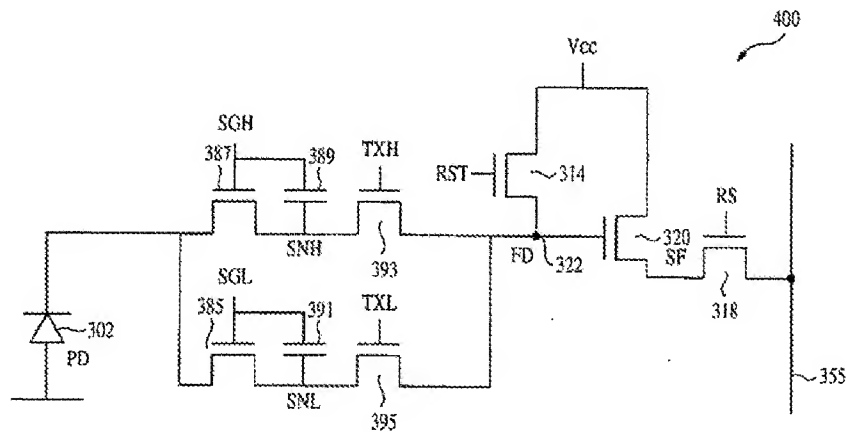


FIG. 3

Appellant's Figure 3 and claimed invention are directed to a pixel cell 400 that includes a first storage node 389 for storing charge generated at a photodiode 302 during an integration period prior to storing the charge at a floating diffusion region 322. A second storage node 391 stores a portion of the charge generated by the photosensitive element 302 during the integration period that is not stored by the first storage node 389. *See Spec.* ¶¶ [0025]-[0029].

Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A pixel cell, comprising:

a first storage node for storing charge generated at a photosensitive element during an integration period prior to storing said charge at a floating diffusion region of said pixel cell; and

a second storage node for storing a portion of said charge generated by said photosensitive element during the integration period that is not stored by said first storage node and prior to storing said portion of said charge at said floating diffusion region.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Merrill	US 6,069,376	May 30, 2000
Guidash	US 6,160,281	Dec. 12, 2000
(“Guidash’281”)		
Miyamoto	US 2003/0090575 A1	May 15, 2003
Guidash	US 6,710,804 B1	Mar. 23, 2004
(“Guidash’804”)		
Weale	US 7,286,174 B1	Oct. 23, 2007

The following rejections are before us for review:

1. The Examiner rejected claims 1, 2, 4, 6, 9-12, 14, 16, 19-25, and 27-35 under 35 U.S.C. § 103(a) as being unpatentable over Weale in view of Guidash’804 or Guidash’281.

2. The Examiner rejected claims 3, 5, 7, 8, 13, 15, 17, 18, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Weale in view of Guidash’804 and Merrill.

3. The Examiner rejected claims 36, 37, 39, 41, 44, and 45 under 35 U.S.C. § 103(a) as being unpatentable over Weale in view of Guidash’804 and Miyamoto.

4. The Examiner rejected claims 38, 40, 42, and 43 under 35 U.S.C. § 103(a) as being unpatentable over Weale in view of Guidash’804, Merrill, and Miyamoto.

ISSUE

The pivotal issue is whether Appellant has shown error in the Examiner's finding that Weale teaches "an integration period" as recited in representative claim 1.¹

PRINCIPLE OF LAW

"[T]he words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (citations omitted).

ANALYSIS

Appellant defines (Reply Br. 10) an integration period as "the time between the reset of the photodiode and the beginning of the readout of the photodiode." However, Appellant argues that Weale describes two integration periods (col. 3, ll. 46-53) as being utilized before a readout, which is contrary to the single integration period of claim 1 (App. Br. 9-10). Appellant further argues that the Examiner's rationale, that the "image capture cycle" of Weale producing a single image (col. 2, ll. 24-39) is tantamount to the conventional definition of an "integration cycle," is incorrect (App. Br. 7). Appellant explains that, contrary to the Examiner's assertion, two images, rather than one image, are created (App. Br. 7).

¹ Appellant collectively argues the independent claims 1, 11, 24, 25, 33, and 36 (App. Br. 7-9). We, accordingly, select claim 1 as representative. *See* 37 C.F.R. § 37.41 (c)(1)(vii).

We are not persuaded by Appellant's argument. We agree with Appellant's definition of an integration period being the time between the reset of the photodiode and the beginning of the readout of the photodiode (Reply Br. 10). However, we disagree with Appellant that (App. Br. 9), contrary to the Examiner's reading (Ans. 15-16), a reasonable reading of Weale teaches creating two images from each of the two integration periods (col. 2, ll. 24-39; col. 12, ll. 14-21; col. 3, ll. 46-53) (i.e., one image from each of the two integration periods). It is clear that while two scenes or frames worth of data are stored in each of the storage sites # 1 and 2 (col. 2, ll. 24-39), there is readout of the two scenes of data, following the last accumulated charge of storage node #2, which produces "a difference signal" (col. 2, ll. 40-43). Thereby, only a single image is created from the difference signal. Nowhere does Weale describe the creation of two images, only the accumulation of two frames or scenes worth of *data* (col. 2, ll. 24-39).

In addition, while there are two resets for each of the storage sites (col. 12, ll. 14-21), neither the broadest definition provided by Appellant nor the recited limitations of independent claim 1 preclude multiple resets. In other words, the Examiner's interpretation is correct, because based on Appellant's own definition (Reply Br. 10), Weale's "integration period begins" with the first reset (t_{RESET1}) and ends at the readout time (t_{READ}) from *both nodes*. We note that Weale also teaches that a single reset could be used via an antiblooming gate rather than using two resets through the TCK gates (col. 12, ll. 6-11).

We note that the Examiner correctly interpreted, based on the plain meaning of the terms, the "integration period" being the time between the

exposure of incident light to a photosensor and the readout of the charges accumulated by the photosensor (Ans. 15-16), which is equivalent to Weale's "image capture cycle" (col. 19, ll. 53-67). As our reviewing Court stated: "the words of a claim 'are generally given their ordinary and customary meaning.'" *See Phillips*, 415 F.3d at 1312.

Thus, under the broadest reasonable interpretation provided by Appellant (Reply Br. 10), the Examiner correctly interpreted Weale's "image capture cycle" (col. 2, ll. 24-39) as tantamount to Appellant's integration period.

For the aforesaid reasons we will affirm the Examiner's rejection of representative claim 1, and also the rejections of the other independent claims 11, 24, 25, 33, and 36 that fall with claim 1. For similar reasons, we will affirm the rejections of dependent claims 2-10, 12-23, 26-32, 34, 35, and 37-45 as no additional arguments of patentability were presented for these claims.

CONCLUSION

Appellant has not shown error in the Examiner's finding that Weale teaches "an integration period" as recited in representative claim 1.

ORDER

The decision of the Examiner to reject claims 1-45 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

Appeal 2009-009959
Application 10/751,440

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